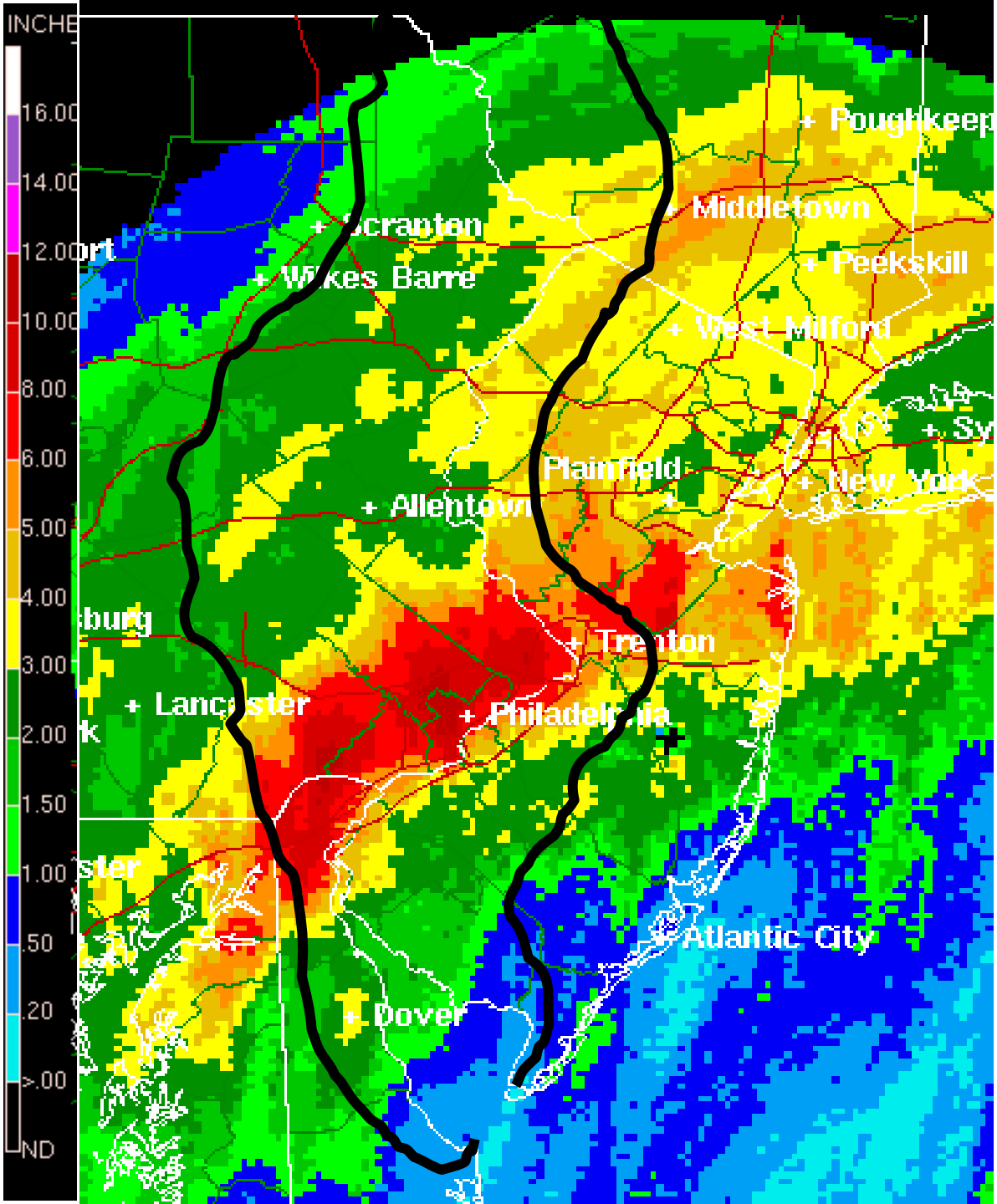
Flooding from Tropical Storm Jeanne - - September 28-29, 2004

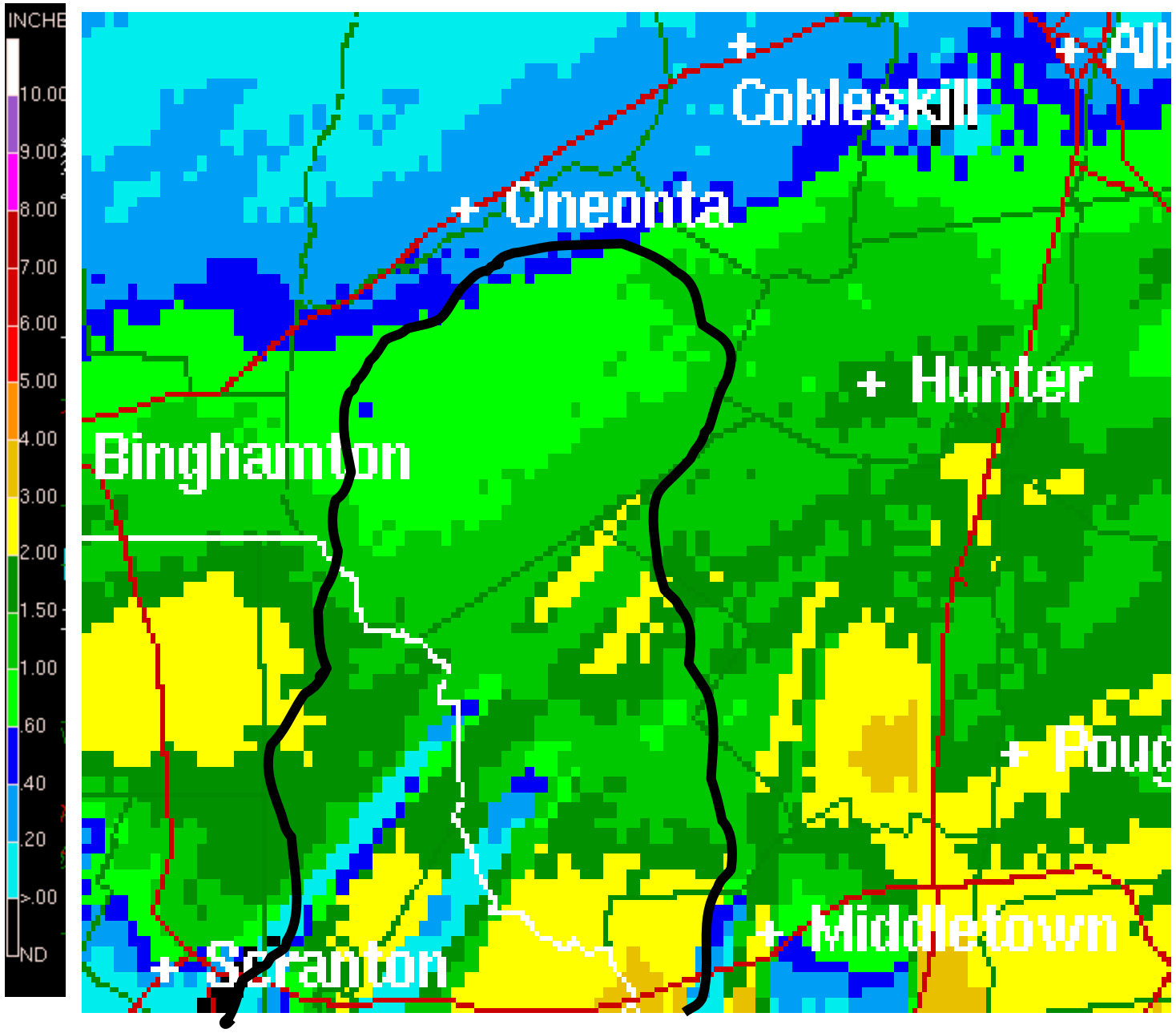
On September 28, 2004, the remnants of Tropical Storm Jeanne brought four- to eight-inches of rain to the Philadelphia metropolitan area – primarily in Delaware, Pennsylvania, and New Jersey north of the "Fall Line," a geologic divide that separates the Coastal Plain from the more highly elevated Piedmont region to the north.

The heavy precipitation caused widespread urban and small stream flooding. Streams from northern Delaware to central New Jersey rose rapidly above flood stage during the evening hours, making roadways hazardous and evacuation difficult. Though flash flooding conditions had been predicted by the National Weather Service, precipitation amounts were even higher than expected in some areas.

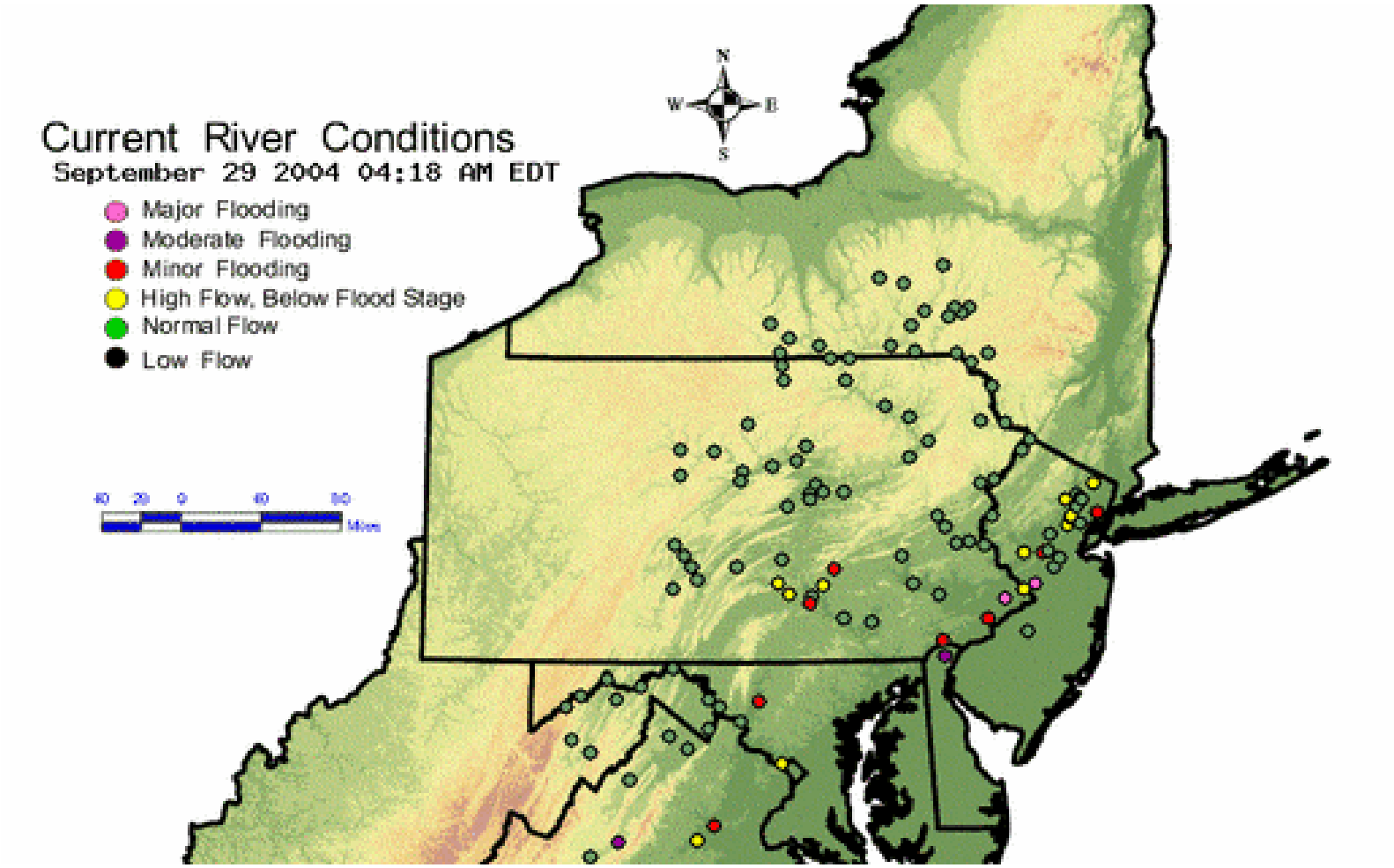


In the Upper Delaware River Basin, heavy precipitation was not as widespread as during Tropical Storm Ivan.

For this reason, flooding did not occur on the main stem Delaware and major tributaries north of Trenton.

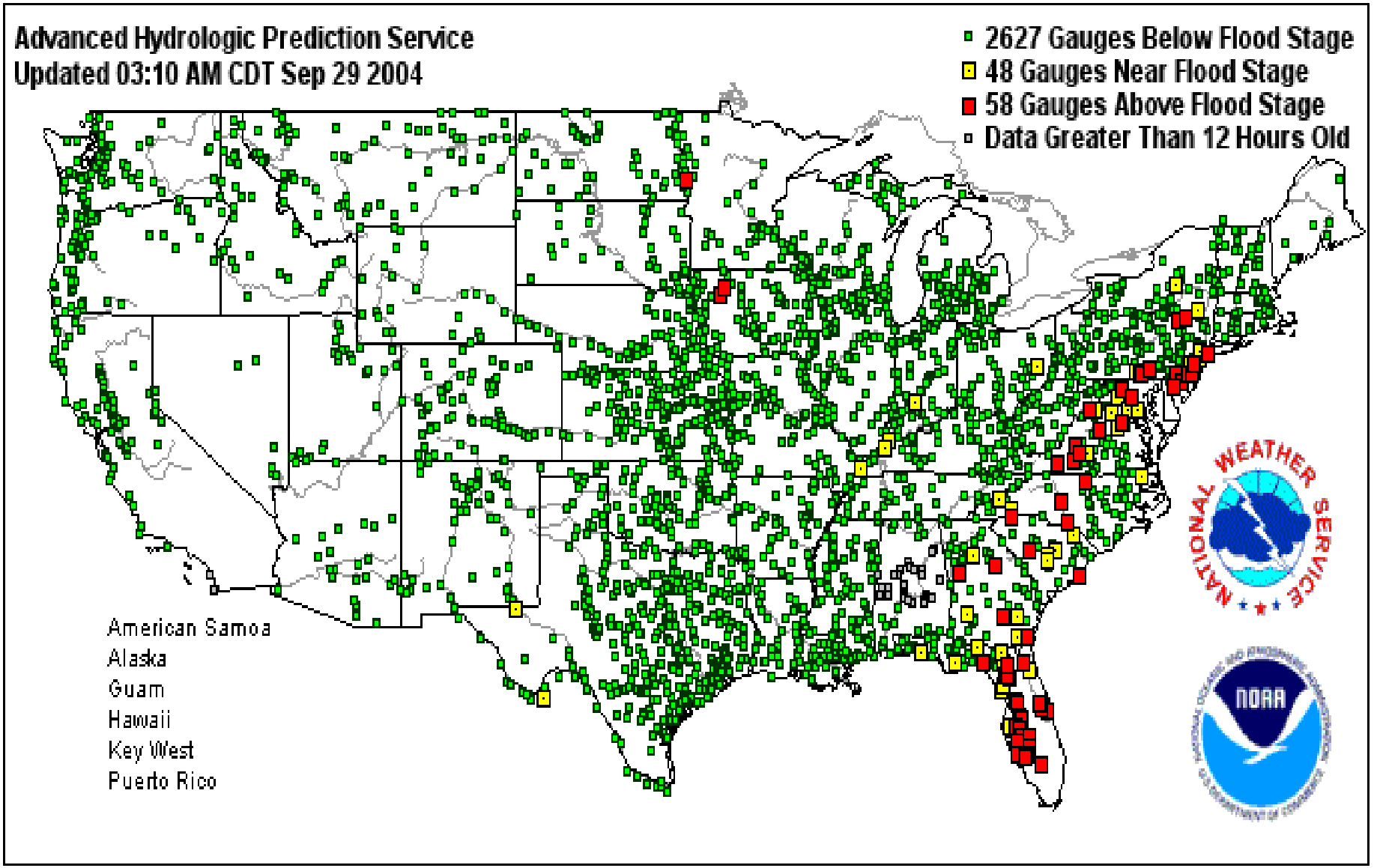


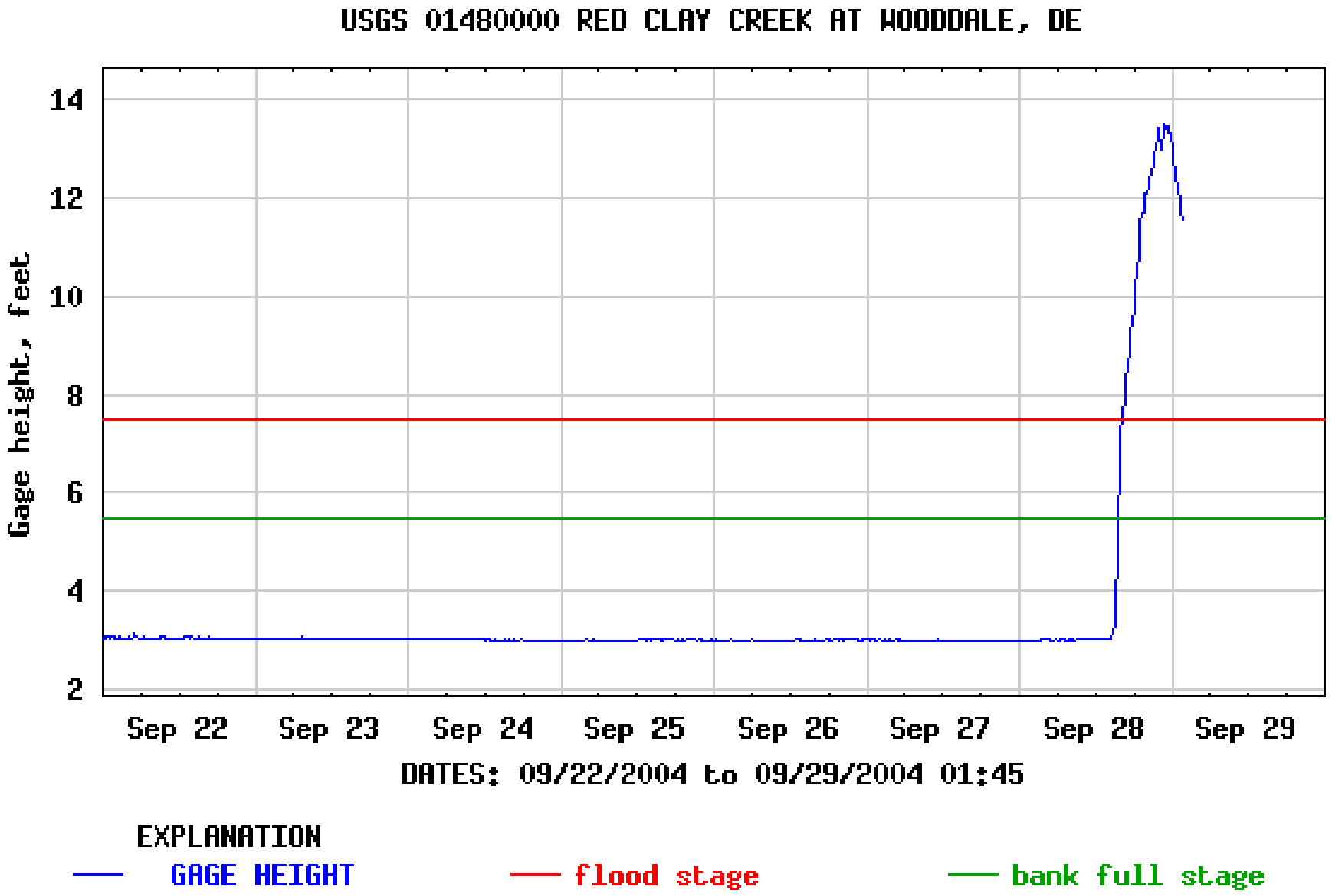
Flooding from the remnants of Tropical Storm Jeanne occurred during the evening of September 28th and crests occurred early on September 29th. Major flooding occurred in urban areas and tributaries to the tidal Delaware River. There were numerous transportation problems and many vehicles were stranded by rapidly rising flood waters, sometimes on roadways that were previously barricaded.



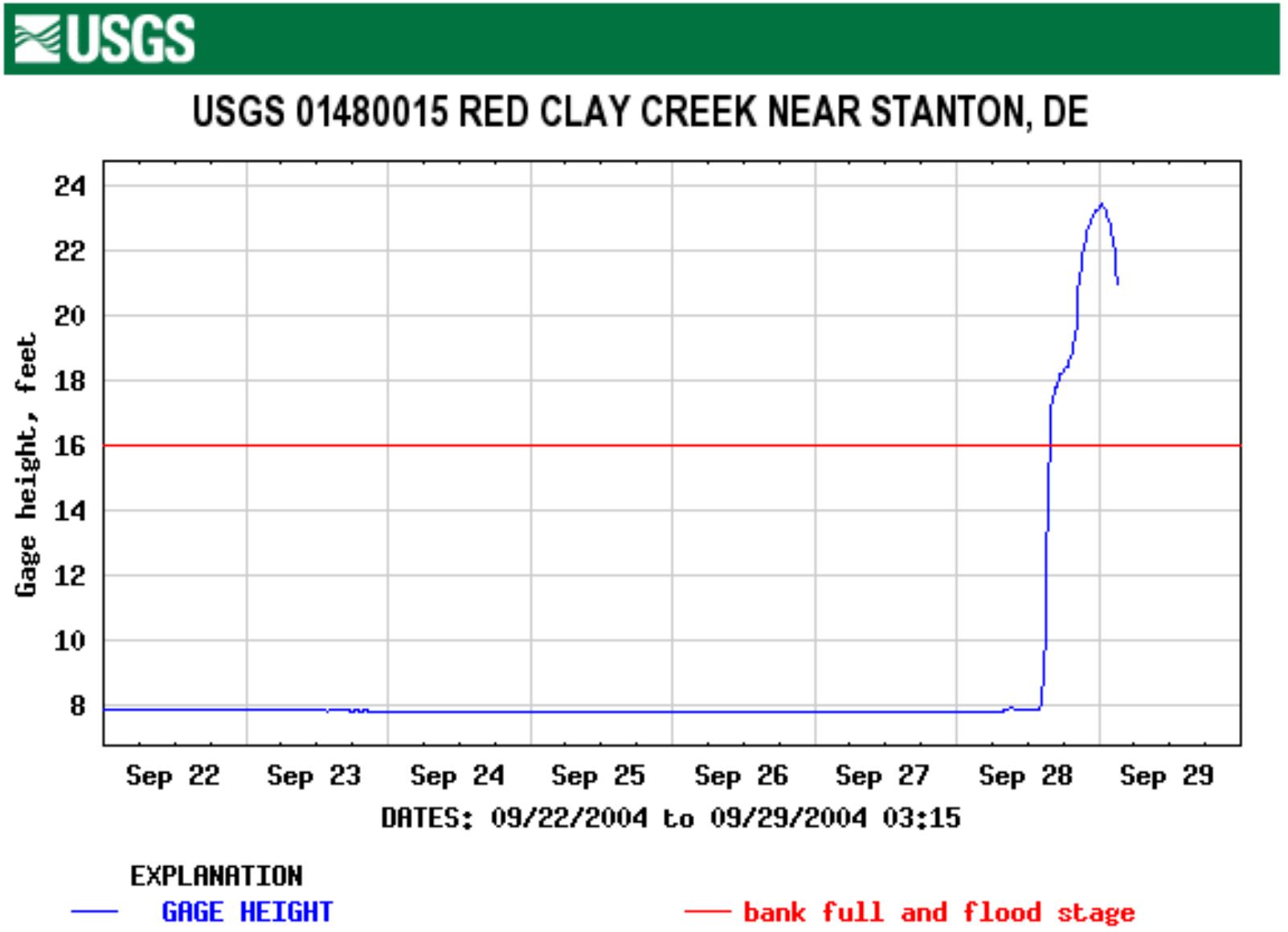
Source: Middle Atlantic River Forecast Center

By the early morning of September 29th, over 100 USGS stream gages comprising the Advanced Hydrologic Prediction Services forecasting network (AHPS) were near or above flood stage in the eastern United States.

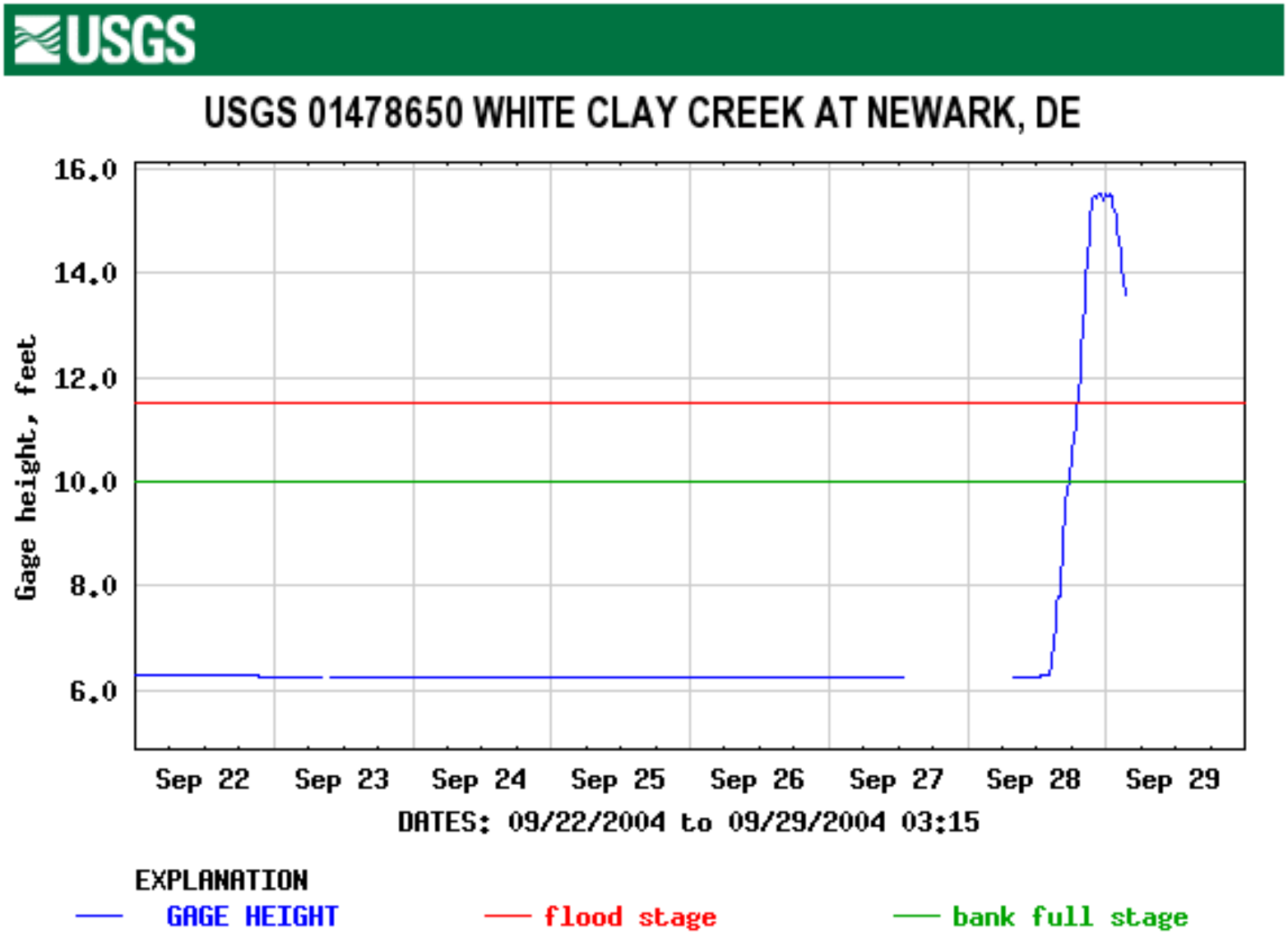




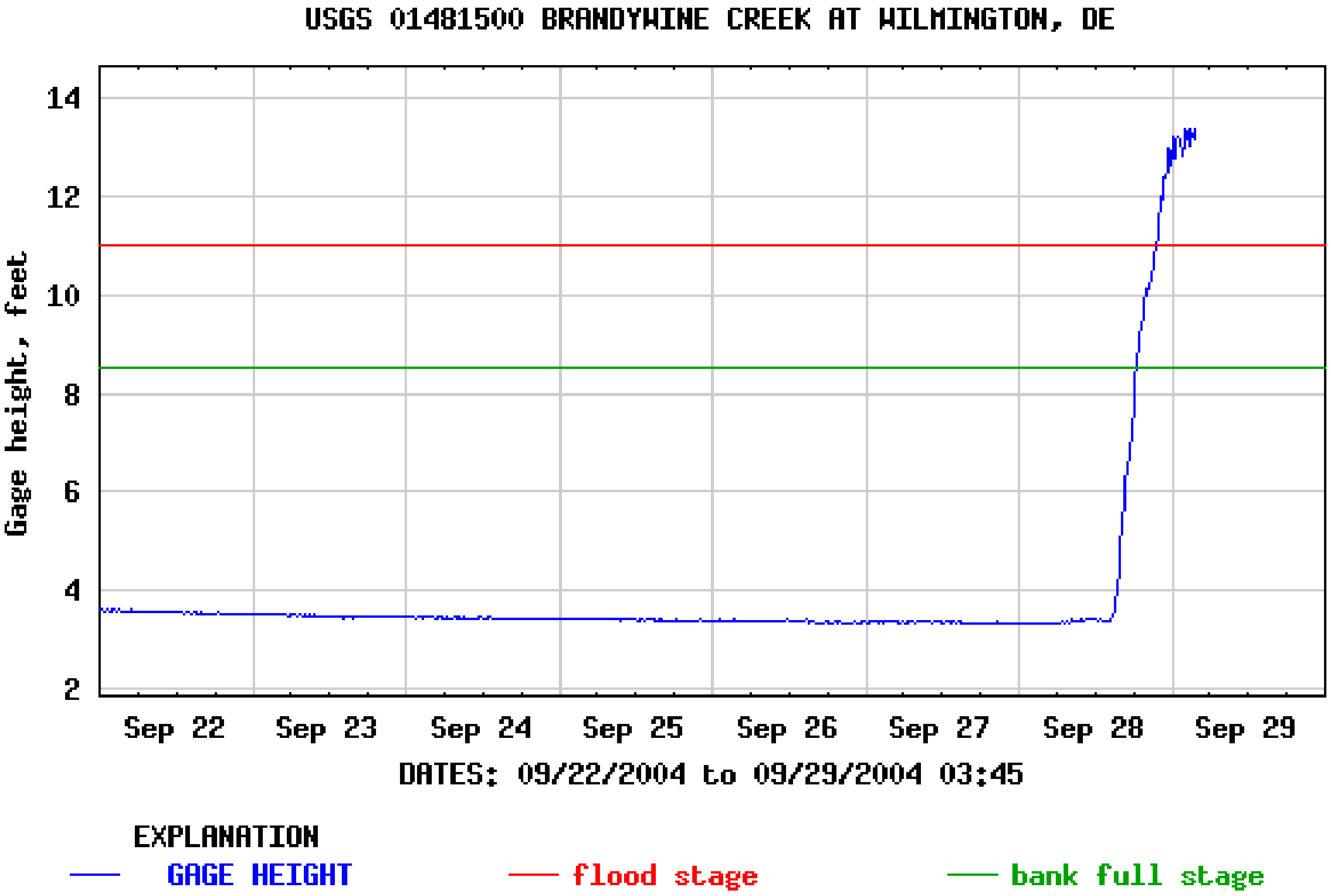
Source: U.S. Geological Survey



Source: U.S. Geological Survey



Source: U.S. Geological Survey



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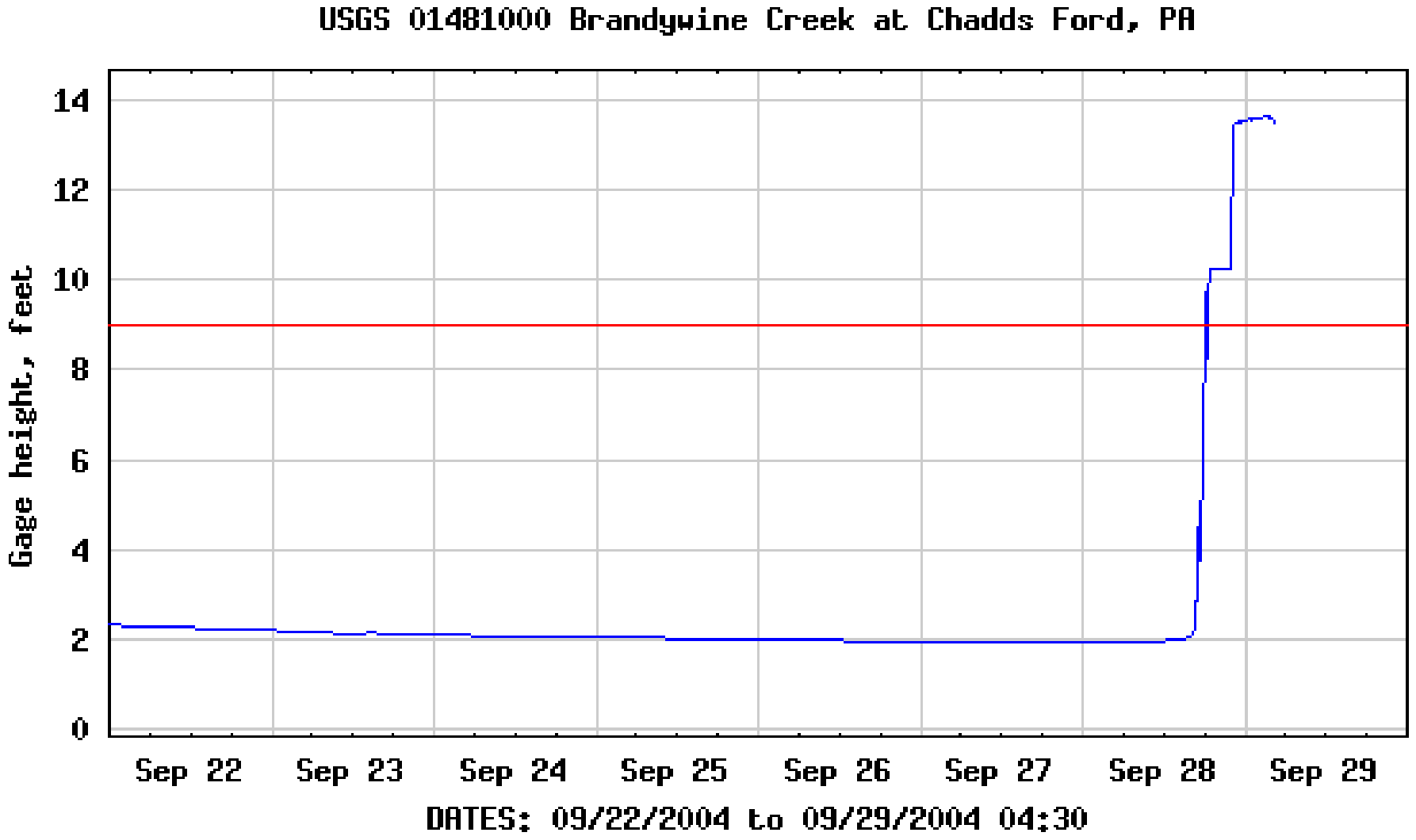
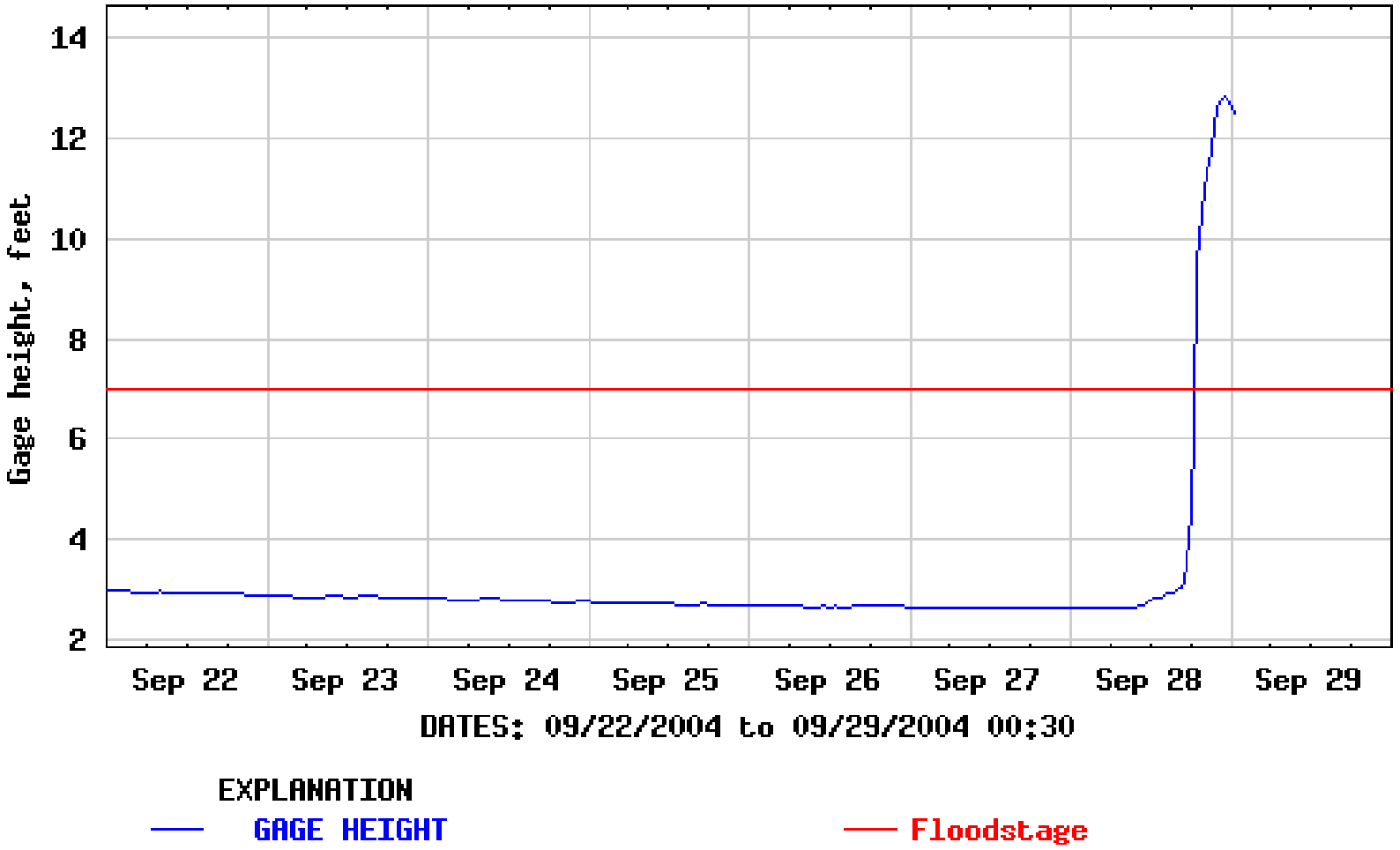


Source: U.S. Geological Survey

USGS

USGS 01480870 East Branch Brandywine Creek below Downingtown, PA

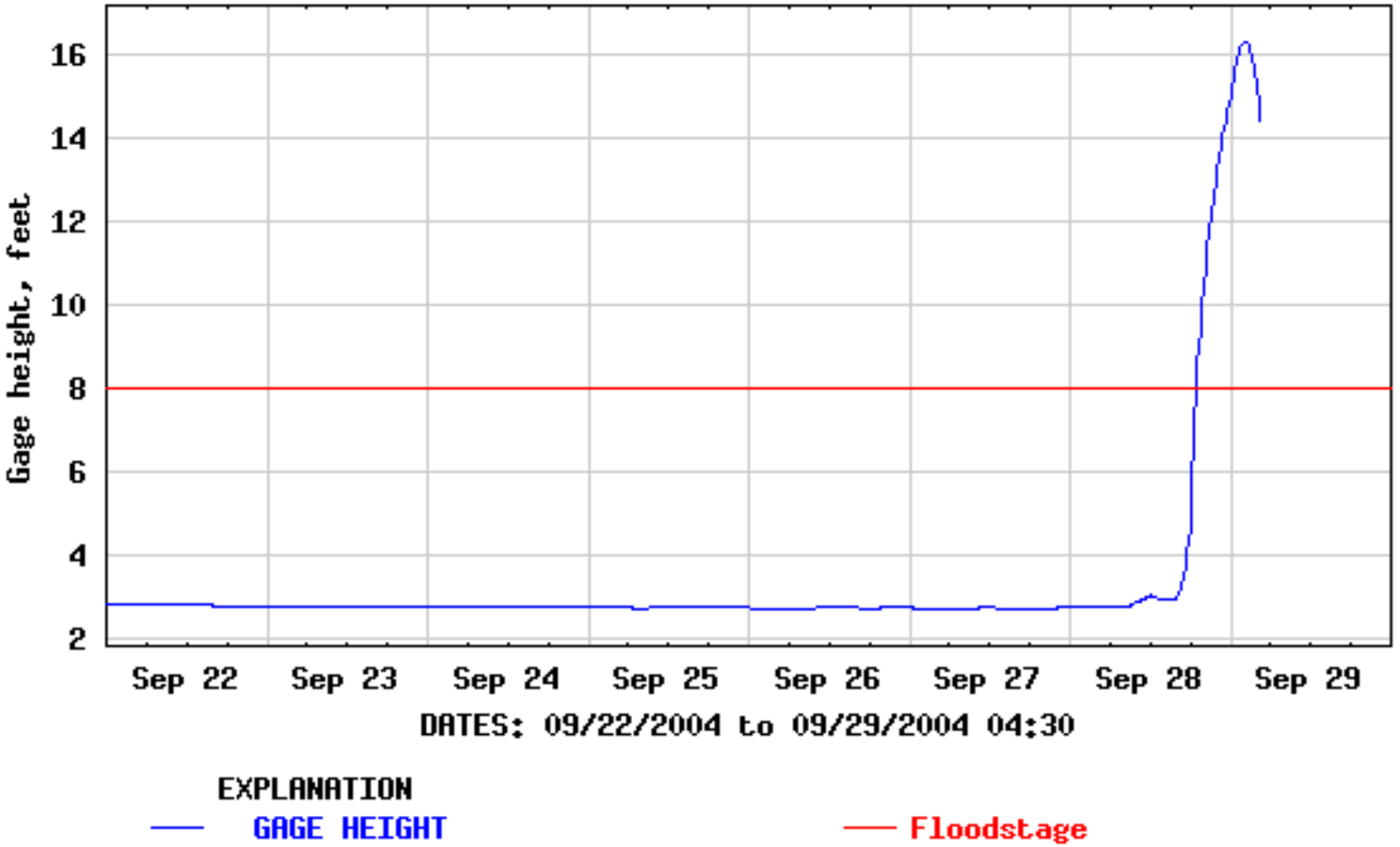


Provisional Data Subject to Revision

Source: U.S. Geological Survey

USGS

USGS 01477000 Chester Creek near Chester, PA



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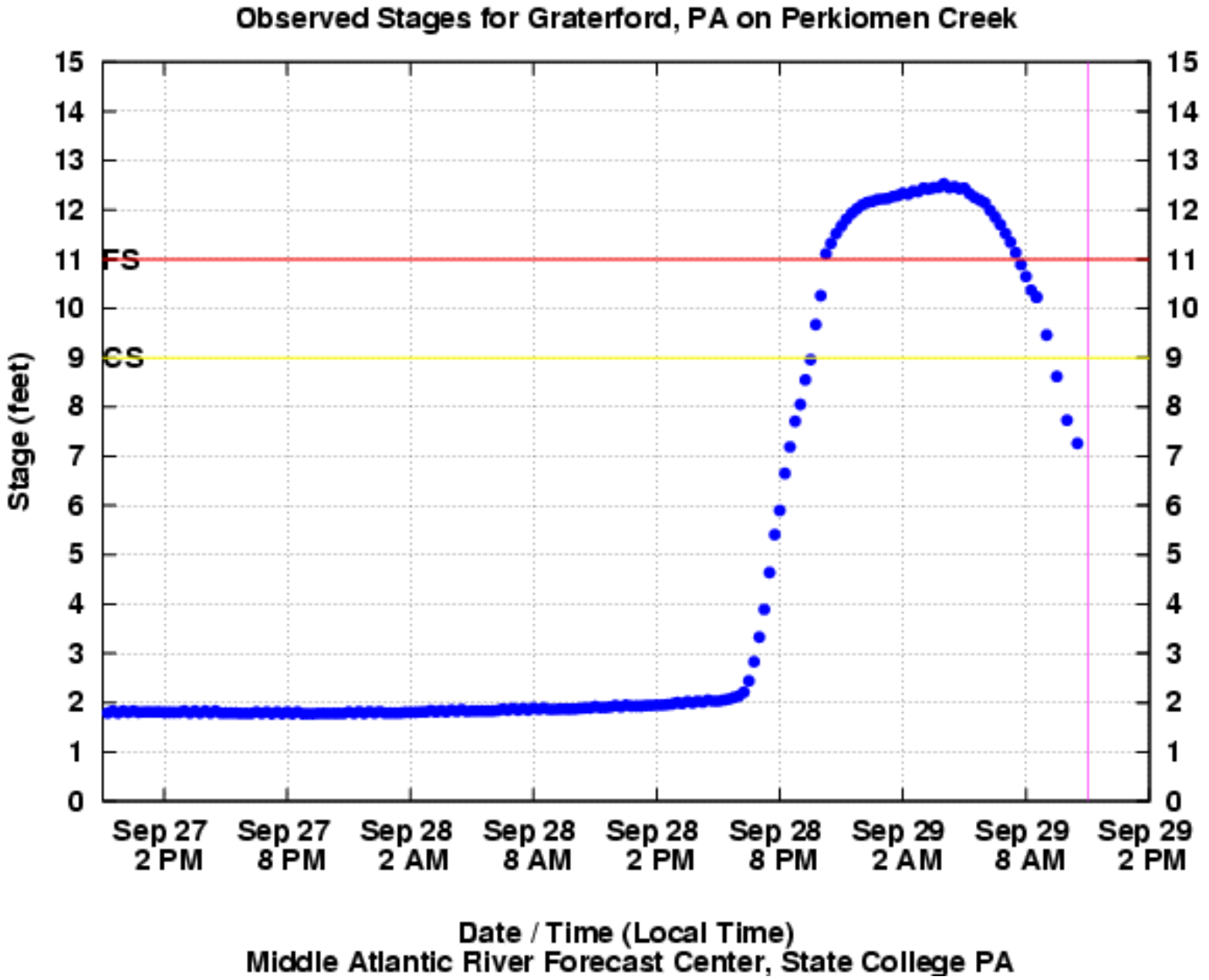
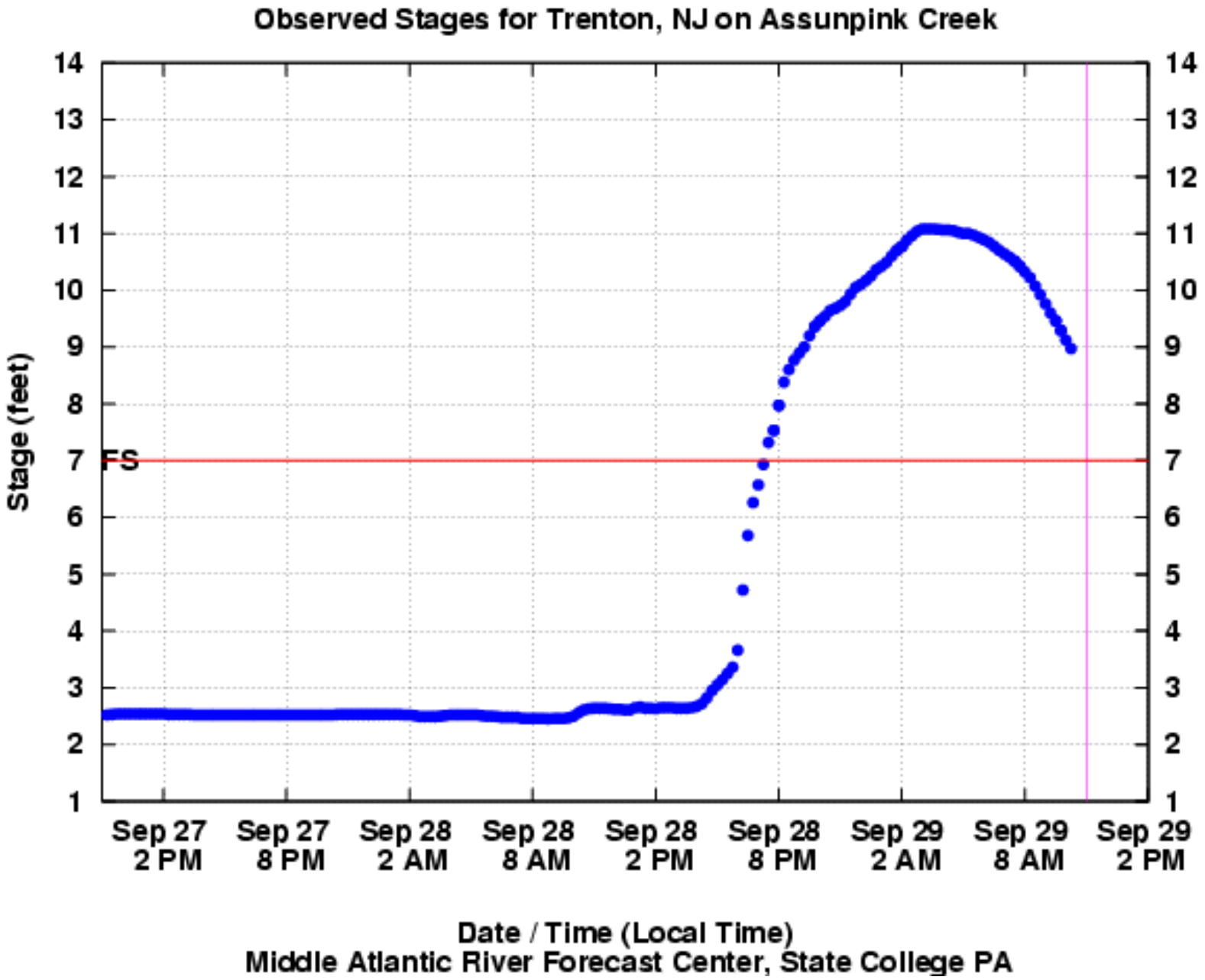
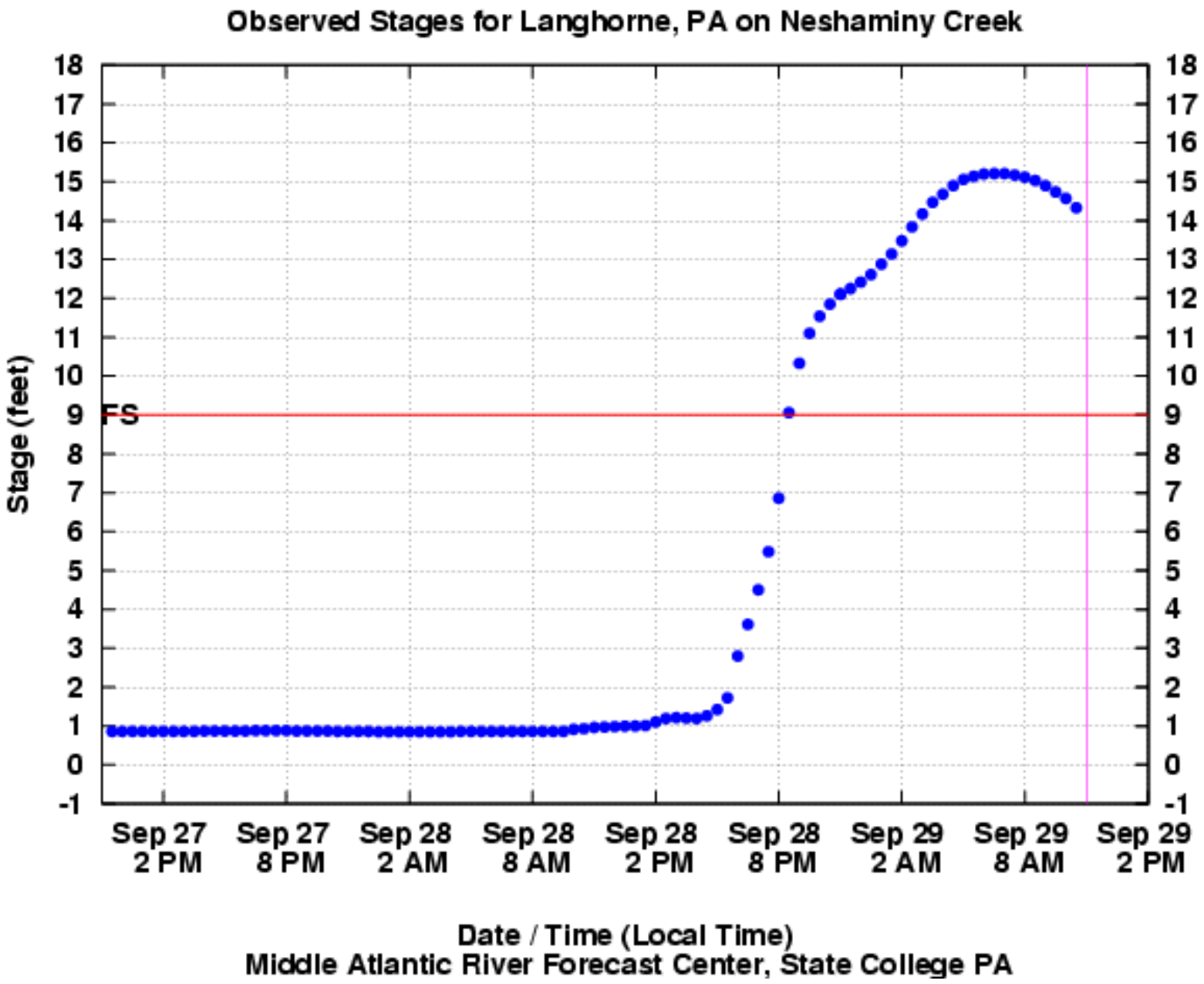
Source: U.S. Geological Survey



Source: National Weather Service



Source: National Weather Service



Source: National Weather Service

Neshaminy Creek - September 29, 2004 – 9:15 a.m. upstream of U.S. Geological Survey Gaging Station and PA State Route 213 Bridge at Playwicki Park, Bucks County, PA. Stage = 15 ft. Flood Stage = 9 ft. Conditions on the Neshaminy were typical of many streams from northern Delaware to central New Jersey.

Neshaminy Creek - September 29, 2004 – 9:15 a.m. – Looking upstream from PA Route 213 Bridge.
Stage of Langhorne Stream Gage = 15 ft. Flood Stage = 9 ft.

Neshaminy Creek - September 29, 2004 – 9:15 a.m. – upstream side of PA Route 213 Bridge. Stage of Langhorne Stream Gage = 15 ft. Flood Stage = 9 ft. Several Neshaminy Creek bridges were closed because of the flooding, causing major traffic delays.